

**Sprague Energy  
Cumberland County  
South Portland, Maine  
A-179-71-L-A (SM)**

**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #1**

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

**A. Introduction**

1. Sprague Energy (Sprague) located in South Portland, Maine was issued Air Emission License A-179-71-K-R on February 8, 2006, permitting the operation of emission sources associated with their bulk petroleum storage and distribution facility.
2. Sprague has requested an amendment to their license in order to replace Boilers #1 and #2 with new thermal heaters.

**B. Emission Equipment**

The following new equipment is addressed in this air emission license:

**Fuel Burning Equipment**

<b><u>Equipment</u></b>	<b><u>Maximum Capacity (MMBtu/hr)</u></b>	<b><u>Maximum Firing Rate (gal/hr)</u></b>	<b><u>Fuel Type, % sulfur</u></b>	<b><u>Stack #</u></b>
Heater #1	9.9	70.7	#2 fuel oil, 0.35%	1
Heater #2	9.9	70.7	#2 fuel oil, 0.35%	2

Heaters #1 and #2 are replacing Boilers #1 and #2.

**C. Application Classification**

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the “Significant Emission Levels” as defined in the Department’s regulations. This modification will not increase permitted emissions of any regulated pollutant. Therefore, this modification is determined to be a minor modification and has been processed as such.

**II. BEST PRACTICAL TREATMENT (BPT)**

**A. Introduction**

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Department’s regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

**B. Thermal Heaters #1 and #2**

The new thermal heaters (Heaters #1 and #2) are replacing Boilers #1 and #2 and shall be used to heat asphalt in existing asphalt storage tanks located at the South Portland terminal.

Heaters #1 and #2 each have a maximum heat input of less than 10.0 MMBtu/hr and are therefore not subject to the New Source Performance Standards (NSPS) Subpart Dc for steam generating units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BACT analysis for Heaters #1 and #2 (9.9 MMBtu/hr each) is the following:

1. The total fuel use for the facility shall not exceed 500,000 gal/year of #2 fuel oil, based on a 12 month rolling total.
2. The maximum sulfur content of the fuel oil fired in Heaters #1 and #2 shall not exceed 0.35% by weight.

3. Chapter 106 regulates fuel sulfur content, however in this case a BACT analysis for SO<sub>2</sub> determined a more stringent limit of 0.35% was appropriate and shall be used.
4. Chapter 103 regulates PM emission limits, however, in this case a BACT analysis for PM determined a more stringent limit of 0.08 lb/MMBtu was appropriate and shall be used. The PM<sub>10</sub> limits are derived from the PM limits.
5. NO<sub>x</sub> emission limits are based on data from similar #2 fired equipment of this size and age.
6. CO and VOC emission limits are based upon AP-42 data dated 9/98.
7. Visible emissions from the heaters shall each not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period.

**C. Annual Emissions**

Sprague shall be restricted to the following annual emissions, based on a 12 month rolling total:

**Total Licensed Annual Emission for the Facility  
Tons/year  
(used to calculate the annual license fee)**

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>	<b>Total HAP</b>
Boilers	4.2	4.2	17.6	12.3	1.3	--	--
Facility Wide Limit	--	--	--	--	--	49.9	9.9
<b>Total TPY</b>	<b>4.2</b>	<b>4.2</b>	<b>17.6</b>	<b>12.3</b>	<b>1.3</b>	<b>49.9</b>	<b>9.9</b>

**ORDER**

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-179-71-L-A subject to the conditions found in Air Emission License A-179-71-K-R and in the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

**The following shall replace Condition (16) of Air Emission License A-179-71-K-R:**

**(16) Boilers and Heaters**

- A. Total fuel use for the facility shall not exceed 500,000 gal/yr of #2 fuel oil. Compliance shall be demonstrated by fuel records from the supplier showing the quantity of fuel delivered. Records of annual fuel use shall be kept on a 12-month rolling total basis. [MEDEP Chapter 115, BACT]
- B. Boilers #3 and #5 shall fire #2 fuel oil with a maximum sulfur content not to exceed 0.50% by weight. Compliance shall be demonstrated by fuel records showing the percent sulfur of the fuel. [MEDEP Chapter 115, BPT]
- C. Heaters #1 and #2 shall fire #2 fuel oil with a maximum sulfur content not to exceed 0.35% by weight. Compliance shall be demonstrated by fuel records showing the percent sulfur of the fuel. [MEDEP Chapter 115, BACT]
- D. Emissions shall not exceed the following:

<b>Emission Unit</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
Heater #1	PM	0.08	MEDEP Chapter 115, BACT
Heater #2	PM	0.08	MEDEP Chapter 115, BACT

- E. Emissions shall not exceed the following [MEDEP Chapter 115, BPT]:

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Heater #1	0.79	0.79	3.49	2.97	0.35	0.02
Heater #2	0.79	0.79	3.49	2.97	0.35	0.02
Boiler #3	0.12	0.12	0.50	0.35	0.04	0.01
Boiler #5	0.24	0.24	1.01	0.70	0.07	0.01

- F. Visible emissions from Boilers #3 and Boiler #5 shall each not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period.  
[MEDEP Chapter 101]
- G. Visible emissions from Heaters #1 and #2 shall each not exceed 20% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period.  
[MEDEP Chapter 101]

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAVID P. LITTELL, COMMISSIONER

**The term of this amendment shall be concurrent with the term of Air Emission License A-179-71-K-R**

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 3/9/06  
Date of application acceptance: 3/10/06

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by Lynn Ross, Bureau of Air Quality.